Date: Tue, 7 Jun 94 04:30:25 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #172
To: Ham-Ant

Ham-Ant Digest   Tue, 7 Jun 94   Volume 94 : Issue 172

Today's Topics:

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

Date: 6 Jun 94 15:10:55 GMT
From: news-mail-gateway@ucsd.edu
Subject: 146/440 HT ant
To: ham-ant@ucsd.edu

Anyone know of an antenna being sold that is better
on a dual band HT than the standard "duckie" I've seen the
two meter whips for HT, but haven't found a dual band version.

Thanks, Robert WB5CRG w5robert@blkbox.com

Date: 6 Jun 1994 09:01:43 -0700
From: nntp.crl.com!crl2.crl.com!not-for-mail@decwrl.dec.com
Subject: Antenna radiation pattern charts
To: ham-ant@ucsd.edu

I wrote a program to plot out the radiation patterns that I got from Mininec. It works pretty well but the question I have is that while my charts shows the gain of the antennas in DBs, I took off 3 dbs so it isn't in DBi, I looked at the other charts in the ARRL handbook and they all have the DBs in minus form. The best you can hope for in theirs is 0. Could someone explain to me why that is? I see that some are in log form and that makes sense but why the minus sign? Thanks for any and all help for a confused ham!

--
Jeff Jones AB6MB
jeffj@crl.com

Date: Mon, 6 Jun 1994 14:39:41 GMT
From: ihnp4.ucsd.edu!usc!math.ohio-state.edu!magnus.acs.ohio-state.edu!csn!col.hp.com!srgenprp!bsplaine@network.ucsd.edu
Subject: Antenna Tuning Question
To: ham-ant@ucsd.edu

My question is.... will the spacing/element length vary with height above ground.... that is, if I set the element lengths and the spacing between them while on saw horses at 2' above ground using an antenna analyzer for best curves for the frequencies I want to work, will those numbers change as I put the antenna at it's working height? Or is it only impedence that changes?

If I am working from a wrong assumption, what is the best way to set these lengths/spacings? By the settings in the setup manual and then taking a reading and then taking the antenna down and putting it back up and taking another reading and... and... and....

There must be a 'proper procedure'.... elmer me.....

73 de Bill/N6GHG

--
/\
\   Bill Splaine   E-MAIL > bsplaine@sr.hp.com   /

/   Hewlett Packard   VOICE   > (707) 577-2913   \
\   Santa Rosa, CA 95403   FAX   > (707) 577-2095   /
/ ALL STANDARD DISCLAIMERS APPLY   PACKET > N6GHG@KC6PJW   \
\/

Date: Mon, 6 Jun 1994 23:45:50 GMT
From: ihnp4.ucsd.edu!munnari.oz.au!newshost.anu.edu.au!harbinger.cc.monash.edu.au!
news.cs.su.oz.au!metro!sunb.ocs.mq.edu.au!tony.mpce.mq.edu.au!
tony@network.ucsd.edu
Subject: Balloon
To: ham-ant@ucsd.edu

>Subject: Balloons and Antennas
>From: cms.tech@cld9.com (Cms Tech)
>Date: Fri, 3 Jun 94 15:14:00 -0600

>What factors should I consider in running an antenna way up in the air
>with a helium filled weather balloon? It seems like you could run the
>antenna 300-400 feet up and really bring in the signals. With a little
>anchoring, a light wind wouldn't be a problem.

All you need to get such an arrangement in the air is a very light cable. About this time last year a group of us from the Sydney Radio Group did this from a mountain top in the Blue Mountains close to Sydney, and got a lot contacts far and wide using 160 to 20 m. It was great fun and generated a lot of intereset on the bands.

We used a very light steel ex-military field telephone cable which served as both the tether line and the antenna. With one WX balloon in a light breeze it worked OK. 2 balloons were required to lift it when the wind got up, and we got enough height out it to work OK. On one occasion the whole assembly decided to take off, carrying with it the tip of a mobile whip to which it was thethered!. A quick-thinking team member saved the day by grabbing the bottom of the tether as it left the ground.

Watch out for trees and power lines.

We plan another attempt some time, and are thinking of using a kite in place of a balloon.

Tony vk2tjf @ 44.136.10.1

vk2tjf @ vk2op.nsw.aus.oc

****
* Dr Tony Farrow,   *
* Physics Department,   *
* Macquarie University,   *
* Sydney, Australia 2109. *
*   tony@mpce.mq.edu.au   *
****

Date: Mon, 6 Jun 1994 11:47:47 GMT
From: iglou!iglou!davidm@uunet.uu.net
Subject: bird doo on coax
To: ham-ant@ucsd.edu

I have several runs of coax, mostly RG-8 and Belden 8214, that are about 10 feet above ground, running from my house out to my tower. I know that sunlight eventually breaks down the jackets and eventually I will have to replace the coax because of it. What I'd like to know is this. The local birds have decided that my coax makes a great rest spot, and have left me their calling cards all over the coax. Will this cause any adverse problems with the jackets, and do I need to be cleaning this off occassionally?

And yes I'm really asking this...April Fools Day was two months ago!

David - KD4RMW
davidm@iglou.com

Date: 7 Jun 1994 01:21:14 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!convex!news.duke.edu!eff!news.kei.com!news.byu.edu!news@network.ucsd.edu
Subject: Curing RF Voltage on Rig case in Mob
To: ham-ant@ucsd.edu

Andy Domonkos (domonkos@delphi.com) wrote:
: Vince,
:
: Try using the Radio Shack snap together 'square' choke kit. Wrap as many
: turns of coax around it as possible, and use several choke if necessary.
: These chokes took care of my stray RF problems. Be sure the coax shield is
: ground at the antenna base also.
:
:
: Andy N3LCW
:

Andy,
     I appreciate your suggestion about the RF choke(s). That sounds like it might indeed be the ticket. Correct me if I am wrong, but is its purpose to block shield currents? Or is there more? I am looking forward to trying your suggestion. Thanks again.

--
Vince Hadley |
KA7GVQ |
hadleyv@bones.et.byu.edu |

Date: 7 Jun 1994 02:55:54 GMT
From: news.delphi.com!domonkos@uunet.uu.net
Subject: Curing RF Voltage on Rig case in Mob
To: ham-ant@ucsd.edu

Vince summed it up perfectly...

Andy N3LCW

Date: 7 Jun 1994 02:56:05 GMT
From: news.delphi.com!domonkos@uunet.uu.net
Subject: Curing RF Voltage on Rig case in Mob
To: ham-ant@ucsd.edu

Try adding chokes per Vinces suggestion until the problem disappears (also, ground the mag mount antenna base first!) I use 2 choke and that solved my problem. I also put one on the power lead to the transceiver the same way, just wrapped about 6 turns thru the Radio Shack choke.

Andy N3LCW

Date: 6 Jun 1994 14:35:09 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!europa.eng.gtefsd.com!
newsxfer.itd.umich.edu!zip.eecs.umich.edu!yeshua.marcam.com!news.kei.com!eff!
news.duke.edu!hudson8.acpub.duke.edu!hl1@@
Subject: ELECTROSTATICLY SHIELDED RHOMBIC
To: ham-ant@ucsd.edu

Is it possible to eletrostaticly shield a rhombic like a full wave loop can be electrostaticly shielded? Can such a rhombic be made of coax? How would

velocity factor effect the lengths? Should a minibox be mounted opposite the resistor end of the antenna and a variable capacitor placed across the output leads for tuning, or would this be unnecessary? What would the shielding do to the nominal 600 ohm impedance?

Date: 6 Jun 94 20:25:15 GMT
From: agate!howland.reston.ans.net!gatech!news-feed-1.peachnet.edu!news.duke.edu!godot.cc.duq.edu!nntp.club.cc.cmu.edu!news@ucbvax.berkeley.edu
Subject: FOR SALE: Mosley Antenna & 30 Ft. Tower
To: ham-ant@ucsd.edu

For Sale: Amateur radio antenna & tower.

This is a 30 foot tower (consisting of 3, 10 feet sections) with a Mosley Classic Tri-Bander antenna. The antenna is mounted on movable rope pulled dolley system with a winch, for lowering and raising the antenna for service while the tower is still vertical.
There also is a motor and remote controller box for positioning the antenna.

Asking price: $300

Call 412-366-1849 for more details or send email to sunil@drycas.club.cc.cmu.edu

This is in Pittsburgh, PA.

Date: Mon, 6 Jun 1994 15:21:09 GMT
From: news!wrs.com!jerald@uunet.uu.net
Subject: Ham-Ant Digest V94 #167
To: ham-ant@ucsd.edu

zabrodsk@med.ucalgary.CA (Rick Zabrodski) writes:

>I have a noise bridge, grid dip oscillator and the mfj swr
>analyzer.....if I could have one it would be the mfj swr machine.....I
>use it 9 out of 10 times when working on antennas.

>***---

>Dr. Rick Zabrodski BSc, MD, CCFP(E)   *   VE6GK "glider king"
>EMAIL: zabrodsk@med.ucalgary.ca   *   "M.D. on weekdays"
>Packet: VE6GK@VE6YYC.#cgy.ab.can.na   *   "Solar powered aviator
>Phone: (403) 271-5123   Fax: 225-1276   *   on weekends!"

>**
>

>
>

--
Jerald R. Pendleton Email: jerald@wrs.com, Personal Email: jrpend@netcom.com
The preceeding message represents only the opinon of the author. This
do not represent the opinions/positions of Wind River Systems, my mother,
my wife or my poodle.

Date: 6 Jun 1994 15:33:38 GMT
From: elroy.jpl.nasa.gov!usc!howland.reston.ans.net!noc.near.net!jericho.mc.com!
fugu!levine@ames.arpa
Subject: Self-supporing TOWER for SALE
To: ham-ant@ucsd.edu

In article hgo@info-server.bbn.com, arina@bbn.com (Arina Rudyakova) writes:
-->   F O R   S A L E
-->
-->   ONLY $325.
-->   * SELF SUPPORTING ROHN-45-BX TOWER *
-->   * Fair condition, 7 years old *
--> * Thrust bearing installed at the top section*
-->
-->The tower willeasely handle a tribander like TA33 plus some UHF and VHF
-->antennas. It is not suitable for TH7 antenna size. The tower is disassembled
-->and ready to pick up in Belmont, MA. $325. Call (617) 484-9153, ALex, WK1O.
-->
-->Also F R E E   P R I N T E R:
-->NEC daisywheel SPINWRITER 7715, wide (23x16x10h), very heavy, very loud.
-->Self test runs fine, do not know about other things.
-->Free for taking, Belmont, MA. (617) 484-9153, Alex, WK1O.
-->
-->

Rohn's catalogs clearly state the BX towers shouldn't have antennas on
them with booms >10'. I don't know what the TA33 is, but I do remember
when I was investigating towers that I couldnt find an amateur tribander
with such a small boom.

Bob Levine KD1GG 7J1AIS VK2GYN formerly KA1JFP
levine@mc.com <--Internet email Phone(508) 256-1300 x247
kd1gg@wa1phy.ma <--Packet Mail FAX(508) 256-3599

Date: 6 Jun 1994 16:55:16 GMT
From: ihnp4.ucsd.edu!swrinde!elroy.jpl.nasa.gov!wp-sp.nba.trw.com!
gatekeeper.esl.com!m42020.esl.com!user@network.ucsd.edu
Subject: VHF/UHF Antennas on Jeep
To: ham-ant@ucsd.edu

WHAT I WOULD DO:

1ST CHOICE IDEA: I'D USE AN OFF THE SHELF (COMET/DIAMOND/MALDOL) CLAMP MOUNT TO THE SPARE TIRE CARRIER OR, POSSIBLY, ONE OF THE MIRRORS. THIS IS WHAT MOST OF MY FRIENDS/ACQUAINTANCES DO, ALTHOUGH SOME HAVE ADDED/WELDED ON MORE BRACKETRY TO ELEVATE THE ANTENNA MORE. I'VE NOTICED THAT THE NEWEST WRANGLERS HAVE A BRACKET FOR A CENTER & HIGH MOUNTED BRAKE LIGHT. PERHAPS THIS COULD BE USED WITH A SIMPLE L-BRACKET ATTACHED SOMEHOW....

2ND IDEA: I'D USE A TRUNK LID TYPE MOUNT, BUT MOUNT IT TO THE EDGE OF THE JEEP'S HOOD OR FENDER. THIS WOULD BARELY LOOK MUCH DIFFERENT THAN HOW THE STOCK AM/FM RADIO ANTENNA LOOKS.

3RD IDEA: GLASS MOUNT TO FRONT WINDSHIELD AS MOST PEOPLE NEVER LOWER THE WINDSHIELD ON THEIR JEEPS.

4TH IDEA: SOME HAVE MOUNTED THEIR ANTENNAS TO THE FRONT BUMPER AREA IN A VARIETY OF WAYS (BRACKET, BRUSHGARD, HOLE THE BUMPER) BUT YOU HAVE TO GET USED TO THE LOOKS AND EXPOSURE OF A FRONT MOUNTED ANTENNA.

5TH IDEA (WHAT I'VE DONE): FORGET/POSTPONE THE WRANGLER AND GET A CHEROKEE (SELECTRAC PREFERRED). BE MORE COMFORTABLE, QUIETER, AND ROLL DOWN THE WINDOWS AND GET A SUN-ROOF IF YOU WANT MORE OPEN AIR. BOY, THAT CHEROKEE WILL GO JUST ABOUT ANYWHERE A WRANGLER WILL GO. TRUTHFULLY, I WOULDN'T MIND OWNING A WRANGLER, TOO, BUT I THINK I'LL CONSIDER A TOYOTA 4WD EXTENDED CAB P/U IN THE NEAR FUTURE FOR AN ADD'L VEHICLE.

MOST UNDESIRABLE IDEA: GET L-BRACKET AND DRILL AND MOUNT ONTO BODY ANYWHERE YOU WANT.

LANCE LEE
ESL, INC./TRW, SUNNVYALE, CA
'89 JEEP CHEROKEE LTD.
FT912/FT2400/FT470 (used for its 70cm band only when mobile) with MAGMOUNT

ON ROOF AND CLAMP MOUNT ON YAKIMA RACK RUNNING 23CM/2M/23CM, RESPECTIVELY.
THE CABLES ARE SIMPLY RUN OVER THE ROOF, THROUGH THE REAR HATCH WEATHER
SEAL AND A HOLE DRILLED THROUGH THE PLASTIC OF THE TAIL LIGHT HOUSING TO
GET THE CABLES INTO THE VEHICLE. GOOD LUCK.

In article <2snhi8$h54@hplvec.lvld.hp.com>, scott@lvld.hp.com (Scott
Turner) wrote:

> I'm looking for anyone's experiences in mounting 2m, 440 and/or dual
> band antennas on CJ's or Wranglers. This particular Wrangler will be a
> hard top, but the top will come off for summers so a roof mount with
> some sort of ground plane installed underneath is out. I plan on
> installing a dual band mobile in the Jeep. Any experiences with what
> worked and what didn't for both antenna type and mount/location on this
> sort of vehicle with this kind of rig would be greatly appreciated.
>
>
> Scott Turner KG0MR scott@hpisla.LVLD.HP.COM

--
Lance Lee, KD6DMR
lance_lee@smtp.esl.com

Date: 6 Jun 1994 11:59:17 -0500
From: ihnp4.ucsd.edu!sdd.hp.com!cs.utexas.edu!math.ohio-state.edu!
hobbes.physics.uiowa.edu!news.uiowa.edu!norand.com!westgj@network.ucsd.edu
Subject: whip antenna resistance
To: ham-ant@ucsd.edu

Just a few simple comments on how to view the efficiency of short antenna's

1) All things being equal, a low radiation resistance is not necessarily a bad
thing.
   For example, a good 4:1 balun or un-un transformer could bring a 12.5 ohm
antenna
   back up to 50 ohms with only a little loss (.5dB or so).

2) The issue that is important is this, after resonating the antenna, how much of
the final
   resistance can be attributed to the radiation resistance.

    Example, grounding loss resistance = 6.25 ohms
                  radiation resistance = 6.25 ohms
           so
              driving point resistance = 12.5 ohms

In principle the efficiency of this combination could be nearly 50% with a well
designed matching network (tline transformer).

3) The reality with short antennas is that the actual radiation resistance is very low,
on the order or 1-2 ohms. Losses in the antenna structure and grounding bring the
value up to the observed 6-10 ohms, and then with a matching technique, a few more ohms
of loss resistance is added for final efficiencies that are very low. (1-2%)

Remember that the measured driving point resistance cannot be separated on these antennas
into radiation and loss components. Get a small antennas design book and calculated the
actual expected radiation resistance for a short vertical whip antenna to get a feel for
the actual efficiency you would expect for a given radiator.

Small antennas are an excellent design and experimentation challenge for the technically
inclined. Since they are small you don't need a lot of space, and the cost can be low. I
would encourage anyone to experiment with designs in this area, the experience will be both
fun and intelectually satisfying.

When you get good at vertical structures, then move in to the big leagues, do the same
designs challenges with the added constraint that the antenna must conform to the structure
to which it will be mounted.

have fun

Guy, N0MMA
westgj@norand.com
319-369-3677

"Antennae are my life" Big antennas high, beat small antennas low, but small
antennas low will allow you to avoid pouring concrete
footings for your car.

Date: 6 Jun 94 20:48:58 GMT
From: agate!darkstar.UCSC.EDU!news.hal.COM!olivea!spool.mu.edu!
howland.reston.ans.net!gatech!newsfeed.pitt.edu!gvls1!rossi@ucbvax.berkeley.edu
To: ham-ant@ucsd.edu

References <7.2850.1189.0N61D036@cld9.com>, <RBcFNc1w165w@voxbox.norden1.com>,
<rwa.770928031@aupair.cs.athabascau.ca>atech
Subject : Re: Balloons and Antennas

In article <rwa.770928031@aupair.cs.athabascau.ca> rwa@aupair.cs.athabascau.ca
(Ross Alexander) writes:
>jgrubs@voxbox.norden1.com (Jim Grubs, W8GRT) writes:
>>cms.tech@cld9.com (Cms Tech) writes:
>>> with a helium filled weather balloon? It seems like you could run the
>>> antenna 300-400 feet up and really bring in the signals. With a little
>>I tried it once. It wasn't worth the work it took to get it up.

It seems to me that a 300-400 (or longer) vertical wire would be too long
even for 160 meters. I would think it would have lots of high angle lobes,
especially on the higher bands (40,20, etc). What do you want that for?

Now, if you could put this couple hundred feet of vertical space to use and
somehow support an array of collinear elements (like we do on 2 meters, etc)
then you might be talking about something useful.

Imagine 3 x 5/8 wave collinear vertical for 40 meters. It would be roughly
200 feet long (or high).   Talk about your low angles of radiation!!

==
Pete Rossi - WA3NNA   rossi@vfl.paramax.COM

Unisys Corporation - Government Systems Group
Valley Forge Engineering Center - Paoli, Pennsylvania
==

End of Ham-Ant Digest V94 #172
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